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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,966	07/08/2004	Tsutomu Hiroki	255663US3PCT	3388

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314		

EXAMINER	
FORD, NATHAN K	

ART UNIT	PAPER NUMBER
1792	

NOTIFICATION DATE	DELIVERY MODE
01/25/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/500,966

Applicant(s)

HIROKI, TSUTOMU

Examiner

Nathan K. Ford

Art Unit

1709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-5, 7, 9-13, 17-21, 23-24 is/are pending in the application.
- 4a) Of the above claim(s) 5,7 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,10-13,17-21,23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/7/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

Art Unit: 1792

DETAILED ACTION*Election/Amendments*

The claim amendments filed on November 5, 2007, are accepted. Acknowledged is the Applicant's election without traverse of claims 1, 4, 10-13, 17-21, and 23-24 in the reply filed on November 5, 2007. Applicant has canceled claims 2-3, 6, 8, 14-16, and 22 and has withdrawn claims 5, 7, 9, and 25-36.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacchi et al., US 5,765,444, in view of Ogawa et al., US 6,293,746.

Claims 1, 4: Bacchi teaches the following:

- A transfer base (11) (Fig. 1A);
- A support for supporting the transfer base (12);
- A motor (92) disposed in the transfer base (12) to effect rotation (6, 10-18);
- A multiple-axis coaxial structure:
 - Torso axis (13);
 - Shoulder axis (16R);
 - Elbow axis (24R);
 - Wrist axis (32R);
- First and second support arms disposed on the transfer base;
 - Wherein the two support arms respectively have a first (34L) and second (34R) support surface to retain substrates (Fig. 4c);
 - Wherein the first and second support surfaces are positioned on the same plane (Fig. 1A);
 - Wherein each arm comprises two motors (50R, 52R) to effect motion (5, 33-51);

Art Unit: 1792

- o Wherein the first and second support arms are projected from the transfer base toward an equivalent side.

The support (12) of Bacchi merely rotates and does not include a stretchable and bendable arm. Ogawa, however, disclosing a transfer robot, teaches an alternative configuration wherein the transfer base support (1) includes a bendable arm (8) affixed to the transfer base (9), on which is disposed a first (20A) and second (20B) support arm (Fig. 1A). The arrangement improves the robot's range of motion, thereby augmenting the locations to which the robot can deliver and receive wafers. A person of ordinary skill in the art would affirm a positive correlation between a transfer mechanism's distribution capacity and substrate processing efficiency. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement Bacchi's transfer base support with a bendable arm to improve the range of motion of the transfer mechanism. In combination, the bendable arm would be affixed atop the support (12) and to the bottom of the transfer base (11).

Claims 10-13: Given the multiple axes of rotation, the support arms have the capability to move arcuately, occupy an identical coordinate space, diverge from each other, or converge toward each other. Further, a recitation concerning the manner in which a claimed apparatus is to be employed does not differentiate the apparatus from prior art satisfying the claimed structural limitations (*Ex parte Masham*, 2 USPQ2d 1647).

Claims 17-21 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacchi in view of Ogawa and in further view of Jevtic, US 6,201,999.

As addressed under claim 1, Bacchi and Ogawa teach each element directed to the transfer mechanism. Bacchi does not teach a common transfer chamber or a plurality of processing chambers; however, the purpose of the transfer mechanism is to function within a cluster tool comprising these elements (1, 21-26). Thus, it would have been obvious to incorporate the carrying mechanism within a multi-chamber system.

Claims 17-18: Supplementing Bacchi is Jevtic, who disposes a transfer mechanism (132) within a common transfer chamber (112) (Fig. 1; 1, 26-35). Processing chambers are connected to the transfer chamber in parallel to expedite processing (2, 14-21; 5, 10-15). Jevtic's disclosure, then, indicates the suitability of disposing a transfer mechanism within a cluster tool. It would have been obvious to one of ordinary skill in the art at the time the invention was made to dispose the transfer mechanism of Bacchi within the cluster tool of Jevtic to achieve the predictable result of processing semiconductors.

Art Unit: 1792

Regarding the claim requiring a parallel configuration between the load-lock chamber and processing apparatus, Jevtic's apparatus has the capability to achieve such a arrangement and provides motivation for doing so – expedited wafer processing. A recitation of intended use does not differentiate the apparatus from prior art satisfying the claimed structural limitations (*Ex parte Masham*, 2 USPQ2d 1647). Lastly, the examiner hereby takes official notice that it is well-known in the art to configure load-lock chambers to be evacuable.

Claims 19-21: These limitations are addressed under claims 10-13.

Claims 23-24: Bacchi teaches a controller (54) that commands the support arm motors (50, 52) in addition to the torso motor (92) (5, 32-40; 7, 11-28). The motors can be operated independently of the others; accordingly, the transfer base can revolve, or move linearly (Bacchi in view of Ogawa under claim 1), during the movement of a support arm. Further, the manner with which one intends to control the motors does not differentiate the apparatus from prior art satisfying the claimed structural limitations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan K. Ford whose telephone number is 571-270-1880. The examiner can normally be reached on M-F, 8:30-5:00 EDT. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

nkf

KARLA MOORE
PRIMARY EXAMINER